

What is claimed is:

1. A cable connector, comprising:

a connector body having a cavity therein;

a mandrel fitted inside said cavity for receiving a prepared coaxial cable end at an end of said connector body;

a first plurality of rings fitted between a portion of said mandrel and said connector body and a second plurality of rings fitted between said first portion of said mandrel and said connector body,

said first plurality of rings and said second plurality of rings having wedge-shaped cross-sections;

said first plurality of rings and said second plurality of rings being interleaved with one another so that adjacent surfaces of first plurality of rings and said second plurality of rings are in tapered relationship with each other;

at least said first plurality of rings being of electrically conductive material;

a first sealing ring having a wedge-shaped cross section adjacent to one of said second plurality of rings and in tapered relationship with said one of said second plurality of rings, said first sealing ring being closer to said end of said connector body than said first and second pluralities of rings;

a second sealing ring adjacent said first sealing ring, said second sealing ring being closer to said end of said connector body than said first sealing ring, and said second sealing ring having a surface in tapered relationship with a tapered surface of said first sealing ring; and

driving means, attached to said connector body at said end of said connector body, for driving said second sealing ring into wedging engagement with said first sealing ring, thereby driving said first sealing ring to drive said first and second pluralities of rings into wedging engagement with each other.

2. A cable connector according to claim 1, wherein said first plurality of rings are gapped.

3. A cable connector according to claim 1, further including a segmented ring disposed between a shoulder of said mandrel and said first plurality of rings.
4. A cable connector according to claim 3, wherein said segmented ring has a tapered surface only on a side adjacent said first plurality of rings.
5. A cable connector according to claim 1, wherein a shoulder of said connector body has a tapered surface adjacent one of said first plurality of rings.
6. A cable connector according to claim 1, wherein said sealing rings are plastic.
7. A cable connector according to claim 1, wherein when a ground sheath of said coaxial cable is interposed between said first portion of said mandrel and said first and second plurality of rings, said driving means causes an interference fit among said connector body, said first and second pluralities of rings, said ground sheath, and said portion of said mandrel.
8. A cable connector according to claim 7, wherein said interference fit among said connector body, said first and second pluralities of rings, and said ground sheath establishes a ground path connection between said ground sheath and said connector body.
9. A cable connector according to claim 8, wherein said mandrel is of plastic.
10. A cable connector according to claim 1, wherein said driving means is effective for causing said first and second sealing rings to seal an inside of said cable connector from an external environment.
11. A cable connector according to claim 1, wherein said driving means includes a nut having a plurality of internal threads that engage a plurality of external threads on said end of said connector body.
12. A cable connector according to claim 11, wherein said first sealing ring is a thrust bearing between said driving means and said first and second pluralities of rings.

13. A cable connector according to claim 1, wherein said mandrel is of plastic.
14. A cable connector according to claim 13, further comprising a plurality of spring leafs biasing between a collet in said connector and said mandrel.
15. A cable connector according to claim 14, wherein said plurality of spring leafs and said mandrel are one-piece.
16. A cable connector according to claim 1, further comprising means for preventing said center conductor from making electrical contact with any grounded portions of said cable connector while connecting said coaxial cable end to said cable connector.
17. A cable connector according to claim 1, further comprising a thrust bearing disposed between said second plurality of rings and a wall of said cavity of said connector body.
18. A method for constructing a cable connector, comprising the steps of:
  - providing a connector body having a cavity therein;
  - providing a mandrel fitted inside said cavity for receiving a prepared coaxial cable end at an end of said connector body;
  - providing a first plurality of rings fitted between a portion of said mandrel and said connector body and a second plurality of rings fitted between said first portion of said mandrel and said connector body, wherein said first plurality of rings and said second plurality of rings have wedge-shaped cross-sections, and wherein at least said first plurality of rings are of electrically conductive material;
  - interleaving said first plurality of rings and said second plurality of rings with one another so that adjacent surfaces of first plurality of rings and said second plurality of rings are in tapered relationship with each other;
  - providing a first sealing ring having a wedge-shaped cross section adjacent to one of said second plurality of rings and in tapered relationship with said one of said second plurality of rings, said first sealing ring being closer to said end of said connector body than said first and second pluralities of rings;
  - providing a second sealing ring adjacent said first sealing ring, said second sealing ring being closer to said end of said connector body than said first sealing ring,

and said second sealing ring having a surface in tapered relationship with a surface of said first sealing ring; and

driving said second sealing ring into wedging engagement with said first sealing ring, thereby driving said first sealing ring to drive said first and second pluralities of rings into wedging engagement with each other.

19. A method according to claim 18, wherein said first plurality of rings are gapped.

20. A method according to claim 18, further comprising the step of providing a segmented ring disposed between a shoulder of said mandrel and said first plurality of rings.

21. A method according to claim 20, wherein said segmented ring has a tapered surface only on a side adjacent one of said first plurality of rings.

22. A method according to claim 18, wherein a shoulder of said connector body has a tapered surface adjacent one of said first plurality of rings.

23. A method according to claim 18, wherein said sealing rings are plastic.

24. A method according to claim 18, further comprising the step of interposing a ground sheath of said coaxial cable between said portion of said mandrel and said first and second plurality of rings, so that said step of driving causes an interference fit among said connector body, said first and second pluralities of rings, said ground sheath, and said portion of said mandrel.

25. A method according to claim 24, further comprising the step of establishing a ground path connection between said ground sheath and said connector body via said interference fit among said connector body, said first and second pluralities of rings, and said ground sheath.

26. A method according to claim 18, further comprising the step of sealing an inside of said cable connector from an external environment when said prepared coaxial cable is inserted into said end of said connector body and said step of driving is completed.

27. A method according to claim 18, further comprising providing a plurality of spring leafs biasing between a collet in said connector and said mandrel.
28. A method according to claim 18, wherein said mandrel is of plastic and said plurality of spring leafs and said mandrel are one-piece.
29. A method according to claim 18, further comprising the step of preventing an exposed center conductor in said prepared cable end from making electrical contact with any grounded portions of said cable connector while connecting said coaxial cable end to said cable connector.